IN THE CLAIMS:

1. (Currently Amended/Withdrawn) A magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer, a magnetoresistive sensor layer disposed between the pair of magnetic shields, an electrode terminal for flowing a signal current perpendicular to the plane of the magnetoresistive sensor layer, and magnetic domain control layers for controlling Barkhausen noise of said magnetoresistive sensor layer, wherein said magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer in a region from the end surface of a media-opposed surface side of the magnetoresistive sensor layer to the depth position are made of a material having a specific resistance not less than 10 mΩcm, and are in contact with at least opposite end surfaces of said magnetoresistive sensor layer in said region;

wherein a material consisting of said magnetic domain control layer is a granular layer made by mixing a hard magnetic material having high coercivity made of a metal magnetic material having ~~as the~~ a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium) with an insulating material made of at least one of Al2O3, SiO2, HfO2, TaO2, TiO2, Ta2O5, AlN, AlSiN, or ZrO2. ~~; and,~~

~~wherein said magnetic domain control layer comprises a layer made of a soft magnetic oxide material having high electric resistivity disposed in contact with opposite ends of said magnetoresistive sensor layer, and a hard magnetic layer, disposed outside the same, made of a metal magnetic material having as the~~

~~composition elements Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium).~~

2. (Withdrawn) The magnetoresistive sensor according to claim 1, comprising magnetic yoke layers disposed between the pair of magnetic shields, having a shape extended from the position exposed from the media-opposed surface in the depth direction, and guiding the magnetic field of the recording media to its interior, wherein said magnetoresistive sensor layer is disposed between the magnetic yoke layers in the position recessed from the media-opposed surface, said magnetic domain control layers are provided on opposite ends of the magnetoresistive sensor layer in a region from the end surface of the media-opposed surface side of the magnetoresistive sensor layer and the magnetic yoke layer to the depth position and are in contact with at least opposite end surfaces of said magnetoresistive sensor layer in said region, and the magnetic domain control layers are in contact with opposite end surfaces of said magnetic yoke layer in at least one portion of the region from the end surface of the media-opposed surface side of said magnetic yoke layer to the depth position.

3. (Withdrawn) The magnetoresistive sensor according to claim 1, comprising a flux guide type magnetic yoke layer disposed between the pair of magnetic shields, having a shape extended from the position exposed from the media-opposed surface in the depth position, and being in contact with any one of the magnetic shield layers to guide the magnetic flux of the media, and magnetic domain control layers for controlling Barkhausen noise of the magnetoresistive

sensor layer and the flux guide type magnetic yoke layer, wherein said magnetoresistive sensor layer is disposed at the upper or lower side of said flux guide type yoke layer in the position recessed from the media-opposed surface, the flux guide type yoke layer has an discontinuous portion in a region in contact with said magnetoresistive sensor layer, said magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer in the region from the end surface of the media-opposed surface side of said magnetoresistive sensor layer and said flux guide type magnetic yoke layer to the depth position are in contact with at least opposite end surfaces of said magnetoresistive sensor layer in the region from the end surface of the media-opposed surface side of said magnetoresistive sensor layer to the depth position, and the magnetic domain control layers are in contact with opposite end surfaces of said magnetic yoke layer in at least one portion of the region from the end surface of media-opposed surface side of said magnetic yoke layer to the depth position.

4. (Withdrawn) The magnetoresistive sensor according to claim 1, wherein said magnetic domain control layer is made of an underlayer made of an oxide having a thickness not more than 5 nm, and an oxide material having high electric resistivity not less than 10 mΩcm formed on the oxide underlayer.

5. (Withdrawn) The magnetoresistive sensor according to claim 2, wherein said magnetic domain control layer is made of an underlayer made of an oxide having a thickness not more than 5 nm, and an oxide material having high electric resistivity not less than 10 mΩcm formed on the oxide underlayer.

6. (Withdrawn) The magnetoresistive sensor according to claim 3, wherein said magnetic domain control layer is made of an underlayer made of an oxide having a thickness not more than 5 nm, and an oxide material having high electric resistivity not less than 10 mΩcm formed on the oxide underlayer.

7-14. (Cancelled)

15. (Original) The magnetoresistive sensor according to claim 1, wherein said magnetic domain control layer is at least partially superimposed on the plane of said magnetoresistive sensor layer.

16. (Original) The magnetoresistive sensor according to claim 1, wherein said magnetoresistive sensor layer is a tunnel magnetoresistive sensor layer.

17. (Withdrawn) A combined magnetic head mounting a write element and a read element, wherein the read element comprises the magnetoresistive sensor according to claim 1.

18-20. (Cancelled)

21. (Currently Amended/Withdrawn) A magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer, a magnetoresistive sensor layer disposed between the pair of magnetic shields, an electrode terminal for flowing a signal

current perpendicular to the plane of the magnetoresistive sensor layer, and magnetic domain control layers, wherein a material consisting of said magnetic domain control layer disposed on opposite ends of the magnetoresistive sensor layer in the region from the end surface of the media-opposed surface side of the magnetoresistive sensor layer to the depth position, is a granular layer made by mixing a hard magnetic material having high coercivity made of a metal magnetic material having ~~as the~~ a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium) with an insulating material made of at least one of Al2O3, SiO2, HfO2, TaO2, TiO2, Ta2O5, AlN, AlSiN, or ZrO2.

22. (Currently Amended) A magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer, a magnetoresistive sensor layer disposed between the pair of magnetic shields, an electrode terminal for flowing a signal current perpendicular to the plane of the magnetoresistive sensor layer, and magnetic domain control layers, wherein said magnetic domain control layer disposed on opposite ends of the magnetoresistive sensor layer in the region from the end surface of the media-opposed surface side of the magnetoresistive sensor layer to the depth position comprises a layer made of a soft magnetic ~~oxide~~ material having high electric resistivity disposed in contact with opposite ends of said magnetoresistive sensor layer, and a hard magnetic layer, disposed outside the soft magnetic material, ~~same,~~ made of a metal magnetic material having ~~as the~~ a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Nb (niobium).

23. (New) A magnetoresistive sensor including a substrate, a pair of magnetic shield layers consisting of a lower magnetic shield layer and an upper magnetic shield layer, a magnetoresistive sensor layer disposed between the pair of magnetic shields, an electrode terminal for flowing a signal current perpendicular to the plane of the magnetoresistive sensor layer, and magnetic domain control layers for controlling Barkhausen noise of said magnetoresistive sensor layer, wherein said magnetic domain control layers disposed on opposite ends of the magnetoresistive sensor layer in a region from the end surface of a media-opposed surface side of the magnetoresistive sensor layer to the depth position are made of a material having a specific resistance not less than 10 mΩmn, and are in contact with at least opposite end surfaces of said magnetoresistive sensor layer in said region;

wherein said magnetic domain control layer comprises a layer made of a soft magnetic material having high electric resistivity disposed in contact with opposite ends of said magnetoresistive sensor layer, and a high magnetic layer, disposed outside the soft magnetic material, made of a metal magnetic material having a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Ni (niobium).

24. (New) The magnetoresistive sensor according to Claim 23, wherein said magnetic domain control layer is at least partially superimposed on the plane of said magnetoresistive sensor layer.

25. (New) The magnetoresistive sensor according to Claim 23, wherein said magnetoresistive sensor layer is a tunnel magnetoresistive layer.

26. (New) A magnetoresistive sensor comprising:

a magnetoresistive sensor layer; and

a magnetic domain control layer having a specific resistance of not less than 10mΩcm, and made of a metal magnetic material having a composition including at least one of the elements of Co (cobalt), Cr (chromium), Pt (platinum), Ta (tantalum), and Ni (nioblum).